



IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Applicants: Frederick J. Fritz, Michael H. Tardugno, Reuben Zielinski and
Randy Tucker

Application No.: 09/804,982 Group: 2643

Filed: March 13, 2001 Examiner: Ni, Suhan

Confirmation No.: 2631

For: HEARING AID WITH TINTED COMPONENTS

CERTIFICATE OF MAILING OR TRANSMISSION	
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AMENDMENT

Mail Stop Amendment
Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

Sir:

This Amendment is being filed in response to the Office Action mailed from the U.S. Patent and Trademark Office on July 19, 2004 in the above-identified application. Reconsideration and further examination are requested.

An extension of time to respond to the Office Action is respectfully requested. A Petition for Extension of Time and the appropriate fee are being filed concurrently with this Amendment.

Please amend the application as follows:

01/25/2005 FNETEKI1 00000035 09804982

02 FC:1202

50.00 OP

Amendments to the Claims

Please cancel Claim 41. Please amend Claims 1, 2, 3 and 10. Please add new Claims 43-44. The Claim Listing below will replace all prior versions of the claims in the application:

Claim Listing

1. (Currently amended) A hearing aid having a shell enclosing one or more hearing aid components, the shell including at least a substantially tinted, translucent or transparent faceplate, at least a portion of at least one hearing aid component located interior of the faceplate being tinted.
2. (Currently amended) The hearing aid of Claim 41 ~~1~~ wherein the hearing aid is insertable into an ear canal.
3. (Currently amended) The hearing aid of Claim 41 ~~1~~ wherein substantially all of the shell is translucent or transparent and is tinted the same color as the at least one hearing aid component.
4. (Original) The hearing aid of Claim 1 wherein the hearing aid is disposable.
5. (Original) The hearing aid of Claim 2 further comprising a cord extending from the hearing aid for pulling the hearing aid out of the ear canal, the cord also being tinted.
6. (Original) The hearing aid of Claim 2 wherein the faceplate is externally visible after the hearing aid is inserted into the ear canal, the faceplate being tinted the same color as the at least one hearing aid component.
7. (Original) The hearing aid of Claim 6 wherein the tint is selected from the following group of colors: gold, copper, tan, brown, and flesh colored.

8. (Original) The hearing aid of Claim 1 wherein the hearing aid components include a microphone, signal processing circuitry, a power source, or a receiver.
9. (Original) The hearing aid of Claim 1 wherein the component is tinted by anodization techniques, heat treatments, or by silk screen methods.
10. (Currently amended) A hearing aid having a shell enclosing one or more hearing aid components, the shell being substantially tinted, translucent or transparent.
11. (Previously presented) The hearing aid of Claim 42 wherein the shell is tinted the same color as the at least one hearing aid component.
12. (Original) The hearing aid of Claim 11 wherein the tint is selected from the following group of colors: gold, copper, tan, brown, and flesh colored.
13. (Original) The hearing aid of Claim 10 wherein the hearing aid is a behind-the-ear type hearing aid.
14. (Original) The hearing aid of Claim 10 wherein the hearing aid is insertable into an ear canal.
15. (Withdrawn) A hearing aid, comprising:
 - a microphone which translates acoustic energy into electrical signals;
 - signal processing circuitry which processes the electrical signals provided by the microphone;
 - a receiver which converts the processed electrical signals into acoustic energy;
 - a power source connectable to the signal processing circuitry; and
 - a shell enclosing one or more of the microphone, the signal processing circuitry, and the receiver, the shell including a substantially transparent or translucent faceplate,

wherein at least a portion of the microphone, the signal processing circuitry, or the receiver is tinted.

16. (Withdrawn) The hearing aid of Claim 15 wherein the hearing aid is insertable into an ear canal.
17. (Withdrawn) The hearing aid of Claim 15 wherein substantially all of the shell is translucent or transparent and is tinted.
18. (Withdrawn) The hearing aid of Claim 15 wherein the hearing aid is disposable.
19. (Withdrawn) The hearing aid of Claim 16 further comprising a cord extending from the hearing aid for pulling the hearing aid out of the ear canal, the cord also being tinted.
20. (Withdrawn) The hearing aid of Claim 16 wherein the faceplate is externally visible after the hearing aid is inserted into the ear canal, the faceplate being tinted the same color as the tinted hearing aid component.
21. (Withdrawn) The hearing aid of Claim 15 wherein the tint is selected from the following group of colors: gold, copper, tan, brown, and flesh colored.
22. (Withdrawn) A hearing aid, comprising:
 - a microphone which translates acoustic energy into electrical signals;
 - signal processing circuitry which processes the electrical signals provided by the microphone;
 - a receiver which converts the processed electrical signals into acoustic energy;
 - a power source connectable to the signal processing circuitry; and
 - a shell enclosing one or more of the microphone, the signal processing circuitry, and the receiver, the shell being substantially transparent or translucent, wherein at least a portion of the microphone, the signal processing circuitry, or the receiver is tinted.

23. (Withdrawn) The hearing aid of Claim 22 wherein the shell is tinted the same color as the at least one hearing aid component.
24. (Withdrawn) The hearing aid of Claim 23 wherein the tint is selected from the following group of colors: gold, copper, tan, brown, and flesh colored.
25. (Withdrawn) The hearing aid of Claim 22 wherein the hearing aid is a behind-the-ear type hearing aid.
26. (Withdrawn) The hearing aid of Claim 22 wherein the hearing aid is insertable into an ear canal.
27. (Withdrawn) A hearing aid comprising at least one tinted hearing aid component disposed within a transparent or translucent shell of the hearing aid.
28. (Withdrawn) The hearing aid of Claim 27 wherein substantially all of the shell is tinted.
29. (Withdrawn) A method of concealing a hearing aid worn by a user, comprising:
 providing a shell enclosing one or more hearing aid components, the shell
 including a substantially translucent or transparent faceplate; and
 tinting at least a portion of at least one hearing aid component.
30. (Withdrawn) The method of Claim 29 wherein substantially all of the shell is translucent or transparent, further comprising tinting substantially all of the shell.
31. (Withdrawn) The method of Claim 29 further comprising tinting a cord that extends from the hearing aid for pulling the hearing aid out of an ear canal of the user.
32. (Withdrawn) The method of Claim 29 further comprising tinting the faceplate.

33. (Withdrawn) The method of Claim 29 further comprising tinting the at least one hearing aid component gold, copper, tan, brown, or flesh colored.
34. (Withdrawn) The method of Claim 1 wherein the component is tinted by anodization techniques, heat treatments, or by silk screen methods.
35. (Withdrawn) A method of concealing a hearing aid worn by a user, comprising:
 providing a shell enclosing one or more hearing aid components, the shell being substantially translucent or transparent; and
 tinting at least a portion of at least one hearing aid component.
36. (Withdrawn) The method of Claim 35 further comprising tinting the shell the same color as the at least one hearing aid component.
37. (Withdrawn) The method of Claim 36 further comprising tinting the at least one hearing aid component and shell gold, copper, tan, brown, or flesh colored.
38. (Withdrawn) The method of Claim 35 wherein the hearing aid is a behind-the-ear type hearing aid.
39. (Withdrawn) The method of Claim 35 wherein the hearing aid is insertable into an ear canal of the user.
40. (Withdrawn) The method of Claim 35 wherein the shell includes a faceplate that is also tinted.
41. (Cancelled)
42. (Previously presented) The hearing aid of Claim 10, wherein at least a portion of at least one hearing aid component is tinted.

43. (New) The hearing aid of Claim 1, wherein the substantially translucent or transparent faceplate is tinted.
44. (New) The hearing aid of Claim 10, wherein the substantially translucent or transparent shell is tinted.

REMARKS

With the entry of the present Amendment, Claims 1-14 and 42-44 remain under consideration in this application. Claims 15-40 stand withdrawn as directed to a non-elected invention. Claim 1 has been amended to specify that the "shell includ[es] at least a substantially translucent or transparent faceplate," and that "at least a portion of at least one hearing aid component located interior of the faceplate [is] tinted." Claim 10 has been amended to specify that the "shell [is] substantially translucent or transparent." New Claim 43 depends from Claim 1 and specifies that the faceplate is tinted. New Claim 44 depends from Claim 10 and specifies that the shell is tinted. Claim 41 has been cancelled, and Claims 2 and 3 have been amended to correct their dependencies. Support for these amendments can be found in the Specification at, for example, p. 22, line 15 through p. 23, line 2. No new matter has been added.

In the Office Action dated July 19, 2005, claims 1, 8, 10 and 13-14 were rejected under 35 U.S.C. § 102 as being anticipated by U.S. 5,253,300 to Knapp ("Knapp"). Claims 2-7, 9, 11-12 and 41-42 were rejected under 35 U.S.C. § 103 as being rendered obvious by Knapp. For the following reasons, it is believed that these rejections are overcome, and that the present claims should be allowed.

As described in the present Specification at p. 22, line 15 through p. 23, line 24, for example, it is desirable to conceal a hearing aid as much as possible as there can be a stigma associated with wearing a hearing aid. This stigma may arise from the perception that those requiring hearing assistance are impaired and old. Thus, in one aspect of the invention, as recited in Claim 1, a hearing aid comprises a faceplate that is formed from a substantially translucent or transparent material. As recited in new dependent Claim 43, this material can, for example, be "tinted" with a color, such as a flesh and root beer tones. When the hearing aid is inserted into the ear canal for use, essentially only the faceplate is visible. The translucent or transparent faceplate picks up the natural color of the user's ear and helps conceal the hearing aid within the user's ear. Moreover, in the hearing aid of the invention, it is desirable to conceal the internal components of the hearing aid or to make them as inconspicuous as possible when worn by the user. Components of the microphone, receiver, circuitry, and the battery typically include shiny silver-colored metal such as stainless steel. With a substantially transparent or translucent

faceplate, these components would be easily visible and preclude making the hearing aid less conspicuous. Conventional hearing aids have not encountered this problem as the shell is typically opaque thereby completely obscuring the internal components.

Accordingly, in another aspect of Claim 1, at least one internal component of the hearing aid that is located interior of the transparent or translucent faceplate (and thus potentially visible to an observer), such as the microphone, receiver, signal processing circuitry, and battery is partially or completely tinted or colored such that the color picks up the natural tones of the skin as well as that of the translucent or transparent faceplate or shell. Tinting or coloring of the internal components, faceplate, and optionally the hearing aid shell casts shadows which further helps the hearing aid to be less conspicuous while it is worn. For example, if the translucent or transparent shell or faceplate is tinted with a flesh color, the internal component(s) can also be tinted with the same color to avoid or minimize the shiny silver-colored metal appearance. The pull cord can also be tinted or colored similar to the shell or faceplate. In alternative embodiments, only those portions which are visible when the hearing aid is worn by the user are tinted or otherwise colored.

In accordance with another aspect, as recited in independent Claim 10, the entire housing or shell of a hearing aid is formed from a substantially transparent or translucent material. This material can also be tinted, i.e., colored, as recited in new dependent Claim 44. This design is particularly advantageous in the case of more visible hearing aids, such as a behind-the-ear (BTE) type hearing aid.

The Examiner's § 102 and § 103 rejections are traversed on the ground that the cited Knapp reference fails to teach or suggest numerous limitation of the presently-amended Claims. For instance, with respect to Claim 1, Knapp does not teach or suggest a hearing aid having a shell enclosing one or more hearing aid components, where the shell includes a *substantially translucent or transparent faceplate, and at least a portion of at least one of the hearing aid components located interior of the faceplate is tinted*. Knapp describes a solar-powered hearing aid that includes a "casing 16" formed by a "face plate 17" and a "rear casing 18." The faceplate and the rear casing can be "flesh colored." (See col. 3, lines 29-33). In order that light passes to internal solar cells located inside the casing, it is "preferred that the faceplate 17 be translucent but not transparent or opaque." (See col. 4, lines 21-30).

In the hearing aid of present invention, by contrast, as recited in Claim 1, the faceplate can be either translucent or transparent, and in addition, *at least one of the components located interior of the faceplate is tinted*. With a substantially transparent or translucent faceplate, the components located behind the faceplate are easily visible and preclude making the hearing aid less conspicuous. Accordingly, at least one component located interior of the transparent or translucent faceplate (and thus potentially visible to an observer), such as the microphone, receiver, signal processing circuitry, and battery is partially or completely tinted or colored such that the color picks up the natural tones of the skin as well as that of the translucent or transparent faceplate or shell, and thereby makes the hearing aid less conspicuous. This problem of internal hearing aid components being conspicuously visible through a transparent or translucent faceplate is a problem that is neither recognized nor solved by the cited Knapp patent, where the sole purpose of making the faceplate translucent (though specifically *not* transparent) is to let light in to the solar cells located interior of the faceplate. There is no teaching, suggestion, or motivation within Knapp to provide the hearing aid as recited in Claim 1 of the invention. Accordingly, it is believed that Claim 1 and its dependents, Claims 2-9 and 43, are all allowable.

With respect to Claim 10, the cited Knapp reference also fails to reach or suggest a hearing aid wherein the *entire housing or shell of a hearing aid is formed from a substantially transparent or translucent material*. In fact, Knapp appears to teach away from such a design, by suggesting that the "casing" of the hearing aid "does not suffer from unsightliness due to visible exposure of solar cells, doors and the like." Thus, the implication is that the "casing 18" of the Knapp device, though it may be flesh colored, is opaque, and not translucent or transparent, to minimize the unsightliness of internal components like a solar cell. By contrast, the present invention specifies that the shell itself is made from a substantially transparent or translucent material. This material can also be tinted, i.e., colored, as recited in new dependent Claim 44, to render it even less conspicuous. This design is particularly advantageous in the case of more visible hearing aids, such as a behind-the-ear (BTE) type hearing aid.

Since the cited Knapp patent fails to teach or suggest the limitation of amended Claim 10, it is respectfully submitted that Claim 10 and its dependents, Claims 11-14, 42 and 44, are all allowable.

Double Patenting Rejections

Claims 1-14 and 42 stand rejected for obviousness-type double patenting as being unpatentable over the claims of U.S. 5,881,159 to Aceti *et al.*, and U.S. 6,473,511 to Aceti *et al.* Applicants will address these rejections upon a finding of allowable subject matter.

Supplemental Information Disclosure Statement

A Supplemental Information Disclosure Statement (IDS) is being filed concurrently herewith. Entry of the IDS is respectfully requested.

CONCLUSION

In view of the above amendments and remarks, it is believed that all claims are in condition for allowance, and it is respectfully requested that the application be passed to issue. If the Examiner feels that a telephone conference would expedite prosecution of this case, the Examiner is invited to call the undersigned.

Respectfully submitted,

HAMILTON, BROOK, SMITH & REYNOLDS, P.C.

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Dated: 1/12/05

January 19, 2005



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Applicants: Frederick J. Fritz, Michael H. Tardugno, Reuben Zielinski and Randall R. Tucker

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Date	Signature
<u>Meredith Murray</u>	
Typed or printed name of person signing certificate	

Mail Stop Amendment
Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

Sir:

Transmitted herewith is an Amendment for filing in the above-identified application.

- [] Small entity status of this application under 37 C.F.R. 1.9 and 1.27 has been established by a Small Entity Statement previously submitted.
- [] A Small Entity Statement to establish small entity status under 37 C.F.R. 1.9 and 1.27 is enclosed.

The fee has been calculated as shown below:

(COL. 1)		(COL. 2)		(COL. 3)	SMALL ENTITY		OR	OTHER THAN SMALL ENTITY	
	CLAIMS REMAINING AFTER AMENDMENT		HIGHEST NO. PREVIOUSLY PAID FOR	PRESENT EXTRA	RATE	ADDIT. FEE		RATE	ADDIT. FEE
TOTAL	43	MINUS	* 42	1	X \$25	\$		X \$50	\$ 50
INDEP	7	MINUS	** 7	0	X \$100	\$		X \$200	\$
<input type="checkbox"/> FIRST PRESENTATION OF MULTIPLE DEP. CLAIM					+ \$180	\$		+ \$360	\$

* not fewer than 20

** not fewer than 3

TOTAL = \$ 0

TOTAL = \$ 50

Petition for Extension of Time

- ☒ Applicant hereby petitions to extend the time to respond to the Office Action dated July 19, 2004 for three months from October 19, 2004 to January 19, 2005. The appropriate fee of \$1,020 is included in the enclosed check.
- ☐ A ☐ month extension of time to respond to the Notice to File Missing Parts dated ☐ was filed on ☐ with payment of a \$☐ fee
- ☐ Applicant hereby petitions for an additional ☐ month extension of time to respond to the Notice to File Missing Parts. The appropriate fee of \$☐ is included in the enclosed check.

Please charge Deposit Account No. 08-0380 for the following fees:

<input type="checkbox"/>	Petition for <input type="checkbox"/> month Extension of Time	\$ _____
<input type="checkbox"/>	Amendment Fee	\$ _____
<input type="checkbox"/>	Other Fees:	\$ _____
		\$ _____
		\$ _____
	TOTAL:	\$ <u>0</u>

A check is enclosed in payment of the following fees:

<input checked="" type="checkbox"/>	Petition for three month Extension of Time	\$ <u>1020</u>
<input checked="" type="checkbox"/>	Amendment Fee	\$ <u>50</u>
<input checked="" type="checkbox"/>	Other Fees:	
	<u>Information Disclosure Statement</u>	\$ <u>180</u>
		\$ _____
	TOTAL:	\$ <u>1250</u>

- ☒ A general authorization is hereby granted to charge Deposit Account No. 08-0380 for any fees required under 37 C.F.R. 1.16 and 1.17 in order to maintain pendency of this application. A copy of this authorization is enclosed for accounting purposes.

Respectfully submitted,

HAMILTON, BROOK, SMITH & REYNOLDS, P.C.

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Dated: 4/19/05